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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/743,545	03/01/2001	Thomas Jung	65243-001	2852

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Harold W Milton
Howard & Howard Attorneys
39400 Woodward Avenue Suite 101
The Pinehurst Office Center
Bloomfield Hills, MI 48304-5151

EXAMINER	
PADGETT, MARIANNE L	

ART UNIT	PAPER NUMBER
1762	14

DATE MAILED: 06/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.	Applicant(s)
09/743,545	Jung
Examiner	**Group Art Unit**
M. L. Padgett	1762

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

☒ Responsive to communication(s) filed on 3/5/03.

☒ This action is **FINAL.**

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle,* 1935 C.D. 1 1; 453 O.G. 213.

Disposition of Claims

☒ Claim(s) 20-39 is/are pending in the application.

Of the above claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 20-39 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claim(s) _____ are subject to restriction or election requirement

Application Papers

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).

☐ All ☐ Some* ☐ None of the:

☐ Certified copies of the priority documents have been received.

☐ Certified copies of the priority documents have been received in Application No. _____.

☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____.

Attachment(s)

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☒ Notice of Reference(s) Cited, PTO-892

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Interview Summary, PTO-413

☐ Notice of Informal Patent Application, PTO-152

☐ Other _____

Office Action Summary

1. Claims 24, 32 and 39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 24, it is unclear what is intended by "a coating material desposed on said box-shaped structure ... for removal and deposit on the object" (emphasis added). It is apparent that the claimed coating material is intended as a source material which may be employed though processes (not specified), such as evaporation or more probably sputtering. But how do these chamber wall coatings cause removal on the objects being treated, i.e., how are they "for removal ... on the objects"? Alternately, was --for removal from the structure and deposition on the object-- the intended meaning? New claim 30 of the method claims uses such phrasing, suggesting missing words/meaning in the phrasing of claim 24.

In claim 32, if NO PLASMA has been created, where are the ions to effect this bombardment coming from? How is the chamber being treated, without resorting to the plasma generating means to create the ions? As written this claim is essentially unexaminable, and appears to contain New Matter. In claim 39, it is unclear how "working gas" should be defined, and how it differs or is related to the other gases that are required to be introduced "successively", i.e., in the listed order. Is "working gas" any old gas one might happen to use in any plasma generation, hence can be reactive, inert, etc.? If it's an inert gas, does one then have to change to a different inert gas to successively go to "inert gas", or may these required substeps be combined? No support for this change in meaning was provided (bottom page 5), and the language of

the remarks suggests that the significantly changed meaning from original claim 19 (where there was a change in gas input over time, but how was not defined) was not intended.

2. Claims 32 and 39 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The language in new claims 32 and 39, imparts new meanings to these claims that does not find support in original claims 12 or 19, which they most closely resemble, and no language supporting their present by phrasing was pointed out by applicant or found by the examiner. As presently phrased, as discussed above in section 1, these claims appear to contain New Matter, although the examiner suspects, it is due to unintended meaning provided by inaccurate phrasing.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. It is noted that applicant's amendments have eliminated the option, where the "box" structure is placed in a vacuum chamber (as in Wright et al), and now soley employ the more common configuration where the structure and the vacuum chamber are one and the same (as in Kay et al), so that "box-shaped structure" may be taken to read on any chamber walls, since boxes may come in any shape, i.e., square, cylindrical, rectangular, etc.

5. Claims 20-21, 23-25, 28-31 and 38 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by E. Kay as discussed in section 3 or paper # 7.

Applicants allege that the new claims distinguish over Kay, because coils 80 are outside the chamber and their box structure is the electrodes, however applicants are directed to review Fig. 3-4; col. 7, lines 45-60 (ref. # 40 = cathode; ref # 41 = sleeve supplying coating material; ref. # 47 = substrate) and col. 9, lines 45-55 (ref. # 80 = magnetic field-producing coil), that clearly show that the chamber walls structure (40) of Kay acts as an electrode, and that coil 80 is NOT the electrode, and is no way excluded by applicant's claim language.

Note ref. # 56 (col. 9, line 1) is Teflon insulation, that isolates the anode 42 which supports the substrate 47 from the cathode/wall structure 40, and also seals the entrance to the chamber for the substrate. 57 and 57' provide gas input openings, and 52 provide the evacuation port (opening or gas outlet). The opening for inputing the substrate, is the same as that which inputs the energy to create the plasma, i.e., the

anode or the line for the power source that energizes it. The claims do not exclude the support and anode being the same structure.

6. Claims 26-27, 32 and 35-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kay, as analogously rejected over related dependant claims in section 3 of paper # 7.

7. Claims 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kay as applied to claims 20-21, 23-32 and 35-38 above, and further in view of Boehnke et al as discussed in section 6 of paper # 7.

8. The noted significance (section 7 of paper 7) of Henshaw or Shenmi et al remains relevant.

9. Claims 22 and rejected under 35 U.S.C. 103(a) as being unpatentable over Kay as applied to claims 20-21, 23-32 and 35-38 above, and further in view of Kügler as discussed in section 8 of paper # 7.

10. The translation to Kitahera et al is supplied, and provides cumulative teaching to Kay, but is lacking in details on the apparatus employed, hence has not been applied.

11. Applicant's arguments filed 3/5/03 and discussed above have been fully considered but they are not persuasive.

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13. Any inquiry concerning this communication should be directed to M L. Padgett at telephone number 703-308-2336 on M-F from about 8:30-4:30 pm, and FAX # (703) 872-9311 (after final) or 305-3078 (informal).

M. L. Padgett/mn 05/30/03
June 07, 2003

/ Marianne L. Padgett /

MARIANNE PADGETT
PRIMARY EXAMINER